

Contribution of Urethrocystoscopy in the Diagnosis of Pathologies of the Lower Urinary Tract in the Urology Department of University Hospital Bocar Sidy SALL in Kati

Amadou Kassogue^{1,*}, Idrissa Sissoko¹, Philippe Togo¹, Mamadou Lamine Diakite², Moussa Salifou Diallo¹, Daouda Sangare¹, Salia Coulibaly³, Mamadou Soumaoro¹, Salim Sissoko¹, Mohamed Sylla¹, Souleymane Keita¹, Albacaye Sember¹, Honore Berthe²

¹Urology Department, University Hospital of Pr Bocar Sidy Sall, Kati, Mali

²Urology Department, University Hospital of Point G, Bamako, Mali

³Radiology Department, University Hospital of Pr Bocar Sidy Sall, Kati, Mali

Email address:

kassogueamadou@hotmail.fr (A. Kassogue)

*Corresponding author

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Abstract: Introduction: The objective of this study is to assess the contribution of urethrocystoscopy in the diagnosis of pathologies of the lower urinary tract. Patients and methods: This was a retrospective and descriptive study carried out in the urology department of the CHU Bocar Sidy Sall in Kati during the period from January 1, 2020 to May 31, 2021, i.e. 17 months. The parameters were: age, sex, indication, examination report. The media used for data collection were: the consultation register, the patient's file and the cystoscopy report register. 2% xylocaine gel local anesthesia has been used in most patients. Data were analyzed with SPSS software version 16.0. Result: We recorded 111 patients who performed urethrocystoscopy. The age group 51 and over was the most represented with 42.3%. The average age was 52 with extremes of 5 and 80. The male sex was in the majority with 77.5%. The indications were dominated by gross hematuria (72.1%). Out of a total of 86 male patients, prostatic hypertrophy was demonstrated in 31.39%. The bladder tumor was the most common pathology with 27.9%. Conclusion: Urethrocystoscopy has been of great benefit in the diagnosis of pathologies of the lower urinary tract. In a context of bilharzian endemia, its use is in great demand in any case of hematuria to support the diagnosis.

Keywords: Urethrocystoscopy, Hematuria, Bladder, Kati

1. Introduction

Urethrocystoscopy is an endoscopic examination that allows visual exploration of the lower urinary tract through a device inserted into the urethral canal to the bladder. Its use is old but has undergone many modifications to provide better results and good comfort for the patient and the practitioner. Widely used in developed countries, it is of limited use in developing countries [1]. The urethrocystoscopy allows the mapping of lesions of the bladder lining. Hematuria being the main indication, its popularization is important especially in

this bilharzian endemic area [2]. Difficulties in acquiring endo-urology equipment for some health facilities limit the performance of urethrocystoscopy. It constitutes a simple examination technique which has its place in the diagnostic and therapeutic approach in several urological pathologies [2]. According to the study by Ouattara A et al. [3] Endoscopy of the lower urinary tract has been invaluable in the diagnosis of urologic conditions and abnormalities. Indeed, in children, its realization requires pediatric endo-urology equipment. The absence of very young subjects and especially children in the sample of the work of Ouattara et al. [3] was linked to his lack of pediatric endo-urology equipment at the time of the study.

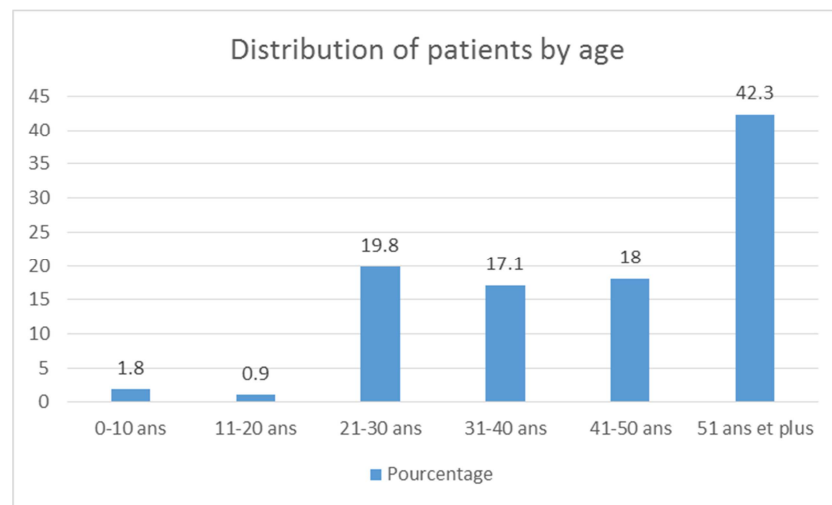
The urology department of Kati University Hospital has recently integrated urological endoscopy into its treatment arsenal. The objective of this study is to assess the contribution of urethrocystoscopy in the diagnosis of pathologies of the lower urinary tract.

2. Patients and Methods

This was a retrospective and descriptive study that took place in the urology department of the CHU Pr Bocar Sidi Sall in Kati during the period from January 1, 2020 to May 31, 2021, i.e. 17 months. It concerned all patients who performed urethrocystoscopy in the department during the study period.

The parameters studied were age, sex, indication, examination report. Not included were patients for whom the above information was not available. The media used for data collection were: the consultation register, the patient's file and the cystoscopy report register. All patients had negative ECBU before urethrocystoscopy.

The urethrocystoscopy equipment consisted of: a video endoscopy column, a rigid cystoscope, a camera, a light source, a flexible cystoscope. 2% xylocaine gel local anesthesia has been used in most patients. Three patients (children) required general anesthesia. The saline was used as an irrigation fluid. Data were analyzed with SPSS software version 16.0.



The 51 and over age group was the most represented with 42.3%.

Figure 1. Distribution of patients by age.

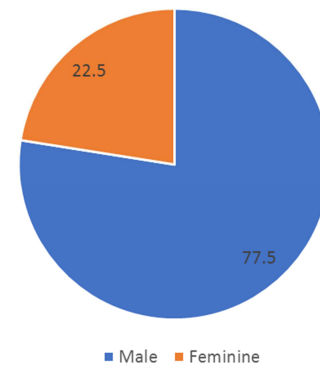
3. Results

During the 17-month study period, we recorded a number of 111 patients who performed urethrocystoscopy, an average of 6.5 patients per month. The age group of 51 years and over was the most represented with 42.3% (Figure 1). The average age was 52.13 with extremes of 5 and 80 years. The male sex was in the majority with 77.5% (figure 2). The indications were dominated by gross hematuria (72.1%) and lower urinary tract disorders (20.7%) (Table 1). The urethra was 90.1% normal. Urethral stricture was observed in 5.4% of patients (Table 2). Out of a total of 86 male patients, prostatic hypertrophy was demonstrated in 31.39% (Table 3). Bladder tumor was the most common pathology with 27.9% followed by bilharz lesions (cystitis and granuloma) (Table 4).

Table 1. Distribution of patients according to the indications for urethrocystoscopy.

Indications	Effectifs	Percentage
Macroscopic hematuria	80	72,1
Lower urinary tract disorders	23	20,7
Mass on ultrasound	6	5,4
Pelvic pain	2	1,8
Total	111	100,0

Macroscopic hematuria was the most common indication at 72.1%.



The male sex was in the majority with 77.5%.

Figure 2. Distribution of patients by sex.

Table 2. Distribution of patients according to the result of the urethrocystoscopy.

Urethra	Effectifs	Percentage
Normal	100	90,1
Stenosis	6	5,4
Trauma	4	3,6
Orthers	1	0,9
Total	111	100,0

The urethra was 90.1% normal. Urethral stricture was observed in 5.4% of patients.

Table 3. Distribution of patients according to the aspect of the prostate.

Prostate	Effectifs	Percentage
Normal	59	68,6
Hypertrophied	27	31,4
Total	86	100,0

Out of a total of 86 male patients, prostatic hypertrophy was demonstrated in 31%.

Table 4. Distribution of patients by cystoscopy result.

Bladder	Effectifs	Percentage
Normal	26	23,4
Bladder tumor	31	27,9
Bilharzial cystitis	14	12,6
Bladder diverticulum	5	4,5
Bladder calcifications	2	1,8
Probe Lesions	4	3,6
Bladder bilharzioma	18	16,2
Bladder neck sclerosis	8	7,2
Bladder stone	3	2,7
Total	111	100,0

The bladder tumor was the most common pathology with 27.9% followed by bilharzian lesions.

4. Discussion

Our study concerned a total of 111 patients, ie an average of 6.5 patients per month. Our result is comparable to that of Ndour NS et al in Senegal who reported the same average [2]. The result of our monthly average is higher than those of Ouattara A in Benin and James LEE in England who reported a monthly average of 3 [3] and 5.4 [4] respectively. This frequency in our study could be explained by the influx of patients referred by other health facilities that do not have arsenal for urethrocystoscopy. The urology department of the CHU Bocar S Sall in Kati is in the process of being the reference service for public hospitals in endourology in Bamako and Kati. The majority age group was 51 and over, with an average age of 52 and extremes of 5 and 80. The average age in our result is slightly lower than that of James LEE et al. who reported an average age of 56.4 years [4]. This average age is higher than that of Jalloh M in Senegal who reported an average age of 47.4 years [5].

The lack of child-friendly material for a good period of our study would explain the small number of children in our population. We recorded three children aged 5, 10 and 11 years in whom, after obtaining the bladder fiberscope by the department, a urethrocystoscopy could be performed. As urology is a service in high demand by senior citizens, the strong representativeness of these in our study could be explained by this. The male sex represented 77.5% against 22.5% for the female sex. This predominance had been reported in Nigeria by Salako AA et al. and in Senegal by Jalloh et al. which recorded respectively 90% [6] and 61.83% [5] in favor of the male sex.

Our indications were dominated by hematuria in 72.1% followed by lower urinary tract disorders in 20.7% and intra-bladder masses seen on ultrasound in 5.4%. Our result is comparable to that of Ndour et al. in Senegal who reported

hematuria in 77% of the indications followed by urinary disorders of the lower apparatus in 10.2% [2]. This result contrasts with that of Ouattara A et al in Benin and Salako AA et al in Nigeria who reported a higher frequency of urinary tract disorders of the lower apparatus of 44.24 [3] and 69% [6], respectively. The frequency of lower urinary tract disorders could be explained by the high representativeness of older males in our population who are susceptible to developing age-related prostatic hypertrophy.

Mali is a country where most regions are endemic to urinary schistosomiasis [7] which is the most common cause of hematuria. The fear of urological tumors in the face of any hematuria prompts the doctor, in addition to other additional examinations, to perform a cystoscopy. The use of urethrocystoscopy was helpful and enabled us to diagnose the following pathologies: Urethral stenosis in 5 patients or 5.4%, 4 cases of urethral trauma (3.6%). The urethra was 90.1% normal. Ouattara A et al. reported 11.5% stenosis, 2 cases of posterior urethral valve and normal urethra in 75.75% [3]. Jalloh M et al. reported urethral stenosis in 5.20% [5]. Dilation of the urethra with a cystoscope allowed us to cross the stenotic area for further examination in our patients. Out of a total of 86 male patients, prostatic hypertrophy was diagnosed in 31.4%. The 68.6% of patients had a normal prostate. Jalloh M et al. reported 14.04% prostatic hypertrophy [5].

Prostatic hypertrophy can be responsible for lower urinary tract disorders and often cause hematuria. The fear of tumors and especially in a context of endemic bilharzia, one of the consequences of which is the bladder tumor, prompts the practitioner to perform a cystoscopy to confirm or rule out a bladder tumor associated with prostatic hypertrophy. The bladder tumor dominated the pathologies in the bladder. It represented 27.9% followed by bladder bilharzoma and bilharzian cystitis respectively by 16.2% and 12.6%. Ouattara A et al. in their study reported 32.72% bladder-fighting 24.84% bladder tumor [3]. Jalloh M et al. reported 20.61% bladder tumor [5].

Elsewhere caused by smoking and other toxicants, bladder tumor in our context is the resulting late complication of schistosoma haematobium infection [8] which is endemic in several regions of the country or natural waterways and constructions of. Water reservoirs for agricultural activities are present. In these areas favorable to bilharzia where the population considers the disease to be a trivial pathology and subsequently neglected, it is revealed later by complications such as bladder calcifications, bilharziomas and bladder tumors. The complications encountered in our study were minor complications represented by 3 cases of post urethrocystoscopy hematuria. Eziyi et al [9] in a series of 204 procedures reported three complications, ie 1.47%. Cystoscopy is a simple examination whose mastery of the technique and the rules of asepsis make it possible to limit the complications associated with this examination [10, 11].

5. Conclusion

Urethrocystoscopy has been of great help in the diagnosis

of pathologies of the lower urinary tract. In a context of bilharzian endemia, its use is in great demand in any case of hematuria to support the diagnosis. It allowed us to diagnose bladder, prostate and urethral pathologies. The age group over 50 was the most affected. Macroscopic hematuria was the main indication in our study. The bladder tumor was the most common pathology. It is simple to perform, is performed on an outpatient basis and under local anesthesia. The good mastery of the technique allowed us to minimize complications.

6. Recommendation

At the end of this study, we recommend performing urethrocystoscopy in any case of hematuria. Make endo-urology materials, including pediatric ones, available to the various urology departments.

Conflicts of Interest

All the authors declare that they have no conflict of interest.

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